WHAT IS CLAIMED IS:

1. An amphiphilic compound having a dendritic branch structure having general formula (I):

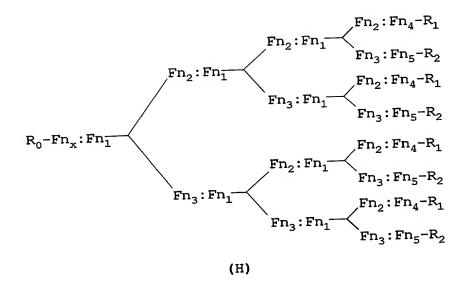
$$R_0 \xrightarrow{R_1} R_2 \qquad (I)$$

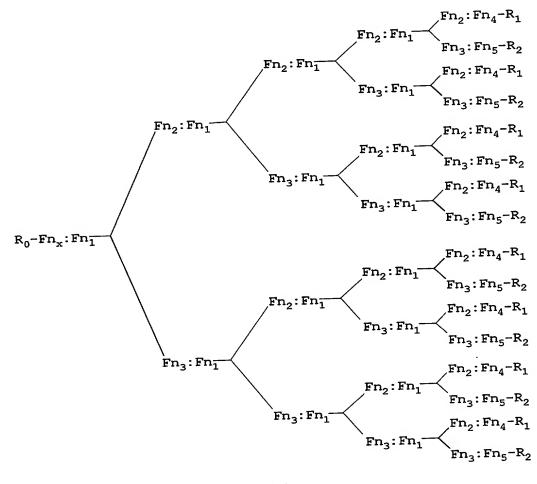
5

10

which is selected from the group consisting of an amphiphilic compound having a dendritic branch structure represented by the following formula (G), an amphiphilic compound having a dendritic branch structure represented by the following formula (H), and an amphiphilic compound having a dendritic branch structure represented by the following formula (J):

 $\begin{array}{c} \text{Fn}_2 \colon \text{Fn}_4 - \text{R}_1 \\ \text{Fn}_3 \colon \text{Fn}_5 - \text{R}_2 \\ \text{Fn}_3 \colon \text{Fn}_4 - \text{R}_1 \\ \text{Fn}_3 \colon \text{Fn}_5 - \text{R}_2 \\ \text{Fn}_3 \colon \text{Fn}_5 - \text{R}_2 \\ \end{array}$





10

15

where Fn_X , Fn_1 , Fn_2 , Fn_3 , Fn_4 and Fn_5 respectively represents a functional reactive group, each of which is bonded to a neighboring functional reactive group; R_0 is a hydrophilic group; R_1 and R_2 are independently a hydrophobic group; and n is an integer of 2 to 4.

- The amphiphilic compound according to claim 1, wherein said functional reactive group is bonded through amide bond or ester bond.
- 3. The amphiphilic compound according to claim 1, wherein said R_0 is poly- or oligo-oxyethylene derivative, poly- or oligo-saccharide derivative, or poly- or oligo-peptide.
 - 4. The amphiphilic compound according to claim 2, wherein said R_0 is poly- or oligo-oxyethylene derivative, poly- or oligo-saccharide derivative, or poly- or oligo-peptide.
 - 5. An amphiphilic compound having a dendritic branch structure having general formula (II):

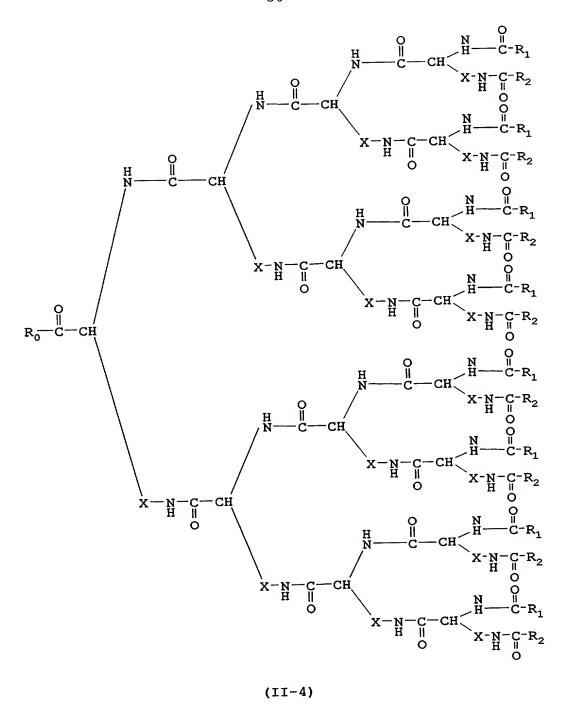
20

25

which is selected from the group consisting of an amphiphilic compound having a dendritic branch structure represented by the following formula (II-1), an amphiphilic compound having a dendritic branch structure represented by the following formula (II-2), an amphiphilic compound having a dendritic branch

structure represented by the following formula (II-3), and an amphiphilic compound having a dendritic branch structure represented by the following formula (II-4):

$$\begin{array}{c|c}
 & O & & O & \\
 & \parallel & & \parallel & \\
 & \parallel & & \parallel & \\
 & R_0 - C - CH & & \parallel & \\
 & X - N - C - R_2 & & \\
 & M - C - R_2 & & \\
 & M - C - R_2 & & \\
 & O & & & \\
\end{array}$$
(II-1)



where R_0 is a hydrophilic group; X is $-(CH_2)_4$ -or $-(CH_2)_p$ -CO- (wherein p is 1 or 2); R_1 and R_2 are independently a hydrophobic group; and n is an integer of 1 to 4.

10

15

20

- 6. The amphiphilic compound according to claim 5, wherein said compound is represented by said formula (II-2), said formula (II-3) or said formula (II-4).
- 7. The amphiphilic compound according to claim 5, wherein each of said R_1 and R_2 is independently an alkyl group.
- 8. The amphiphilic compound according to claim 7, wherein said alkyl group contains 1 to 30 carbon atoms.
- 9. The amphiphilic compound according to claim 6, wherein each of said R_1 and R_2 is independently an alkyl group.
- 10. The amphiphilic compound according to claim 9, wherein said alkyl group contains 1 to 30 carbon atoms.
- 11. The amphiphilic compound according to claim 5, wherein said R_0 is poly- or oligo-oxyethylene derivative, poly- or oligo-saccharide derivative, or poly- or oligo-peptide.
- 12. The amphiphilic compound according to claim 6, wherein said R_0 is poly- or oligo-oxyethylene derivative, poly- or oligo-saccharide derivative, or poly- or oligo-peptide.
- 13. The amphiphilic compound according to claim 5, wherein said R₀ is represented by a formula:

 R-(OCH₂CH₂)_mCH₂NH- or R-(OCH₂CH₂)_mOCH₂C(O)NHCH₂CH₂NH
 where R is H-, CH₃-, CH₃C(O)-, HOOCCH₂-,

 H₂NCH₂CH₂NHC(O)CH₂-, or poly- or oligo-peptides; and m is an integer of 1 to 3000.

- 14. The amphiphilic compound according to claim 6, wherein said R_0 is represented by a formula: $R-(OCH_2CH_2)_mCH_2NH- \text{ or } R-(OCH_2CH_2)_mOCH_2C(0)NHCH_2CH_2NH- \text{ where R is H-, CH}_3-, CH_3C(0)-, HOOCCH}_2-, H_2NCH_2CH_2NHC(0)CH_2- \text{ or poly- or oligo-peptides; and m is an integer of 1 to 3000.}$
- 15. An amphiphilic compound having a dendritic branch structure having following general formula (III):

$$R_0 = \begin{bmatrix} H & O & \\ H & C & C \\ \hline & C & C$$

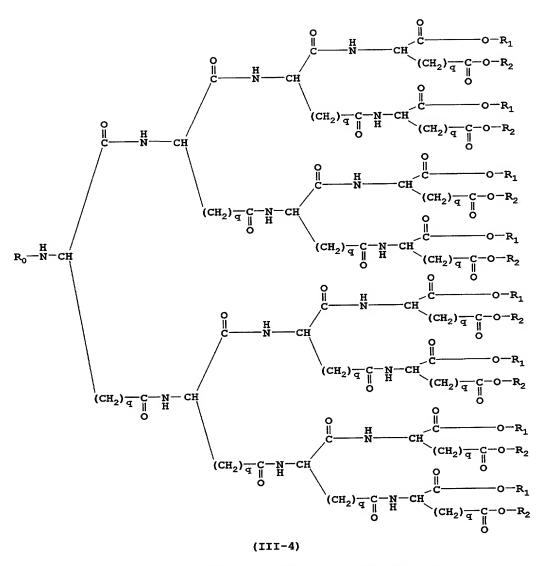
which is selected from the group consisting of an amphiphilic compound having a dendritic branch structure represented by the following formula (III-1), an amphiphilic compound having a dendritic branch structure represented by the following formula (III-2), an amphiphilic compound having a dendritic branch structure represented by the following formula (III-3), and an amphiphilic compound having a dendritic branch structure represented by the following formula (III-4):

$$R_0 = N - CH < CH_2 = O - R_1$$

$$(CH_2) = C - O - R_2$$

$$(III-1)$$

(III-3)



where R_0 is a hydrophilic group; R_1 and R_2 are independently a hydrophobic group; n is an integer of 1 to 4 and q is 1 or 2.

- 16. The amphiphilic compound according to claim 15, wherein said compound is represented by said formula (III-2), said formula (III-3) or said formula (III-4).
- 17. The amphiphilic compound according to claim 15, wherein each of said R_1 and R_2 is independently an alkyl group.

20

- 18. The amphiphilic compound according to claim 17, wherein said alkyl group contains 1 to 30 carbon atoms.
- 19. The amphiphilic compound according to claim 16, wherein each of said R_1 and R_2 is independently an alkyl group.
 - 20. The amphiphilic compound according to claim 19, wherein said alkyl group contains 1 to 30 carbon atoms.
- 10 21. The amphiphilic compound according to claim 15, wherein said R_0 is poly- or oligo-oxyethylene derivative, poly- or oligo-saccharide derivative, or poly- or oligo-peptide.
- 22. The amphiphilic compound according to

 15 claim 16, wherein said R₀ is poly- or oligo-oxyethylene derivative, poly- or oligo-saccharide derivative, or poly- or oligo-peptide.
 - 23. The amphiphilic compound according to claim 15, wherein said R_0 is represented by a formula: $R-(OCH_2CH_2)_mCH_2NH-$ or $R-(OCH_2CH_2)_mOCH_2C(O)NHCH_2CH_2NH-$ (wherein R is H-, CH_3 -, $CH_3C(O)$ -, $HOOCCH_2$ -, $H_2NCH_2CH_2NHC(O)CH_2$ or poly- or oligo-peptides; and m is an integer of 1 to 3000.
- 24. The amphiphilic compound according to claim 16, wherein said R_0 is represented by a formula: $R-(OCH_2CH_2)_mCH_2NH- \text{ or } R-(OCH_2CH_2)_mOCH_2C(O)NHCH_2CH_2NH-$ wherein R is H-, CH₃-, CH₃C(O)-, HOOCCH₂-,

 $\rm H_2NCH_2CH_2NHC\,(O)\,CH_2-$ or poly- or oligo-peptides; and m is an integer of 1 to 3000.